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10/611,683	06/30/2003	Surendra Verma	13768.783.45	5332

47973 7590 01/25/2007
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EXAMINER

ONI, OLUBUSOLA

ART UNIT	PAPER NUMBER
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2168

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/611,683

Applicant(s)

VERMA ET AL.

Examiner

OLUBUSOLA ONI

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 45-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 and 45-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Responds to Amendment

1. This action is responsive to communications: Amendment filed on 12/15/2006
2. Claims 1-17, 27, 45 and 55 have been amended. Claims 28-44 and 56-57 have been cancelled.
3. New grounds of rejection are based on newly amended claims.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 17-22 and 25-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 17 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In claim 17, "determining whether the file control block references a resource manager control block and if not" is recited; however, it is an abstract idea per se which does not produce useful concrete and tangible result, because what happens if the condition is satisfied, as such it is not limited to tangible, patent-eligible subject matter.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

a. A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-27 and 45-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Bendert et al. (Patent No. 6,738,971) hereinafter "Bdert"

For claim 1, Bendert teaches " in a distributed computing environment that typically uses a single distributed transaction coordinator to monitor changes to files on a per logical system volume basis, a series of computer programs with computer executable instructions within one or more computer storage medium used to provide a plurality of independent resources managers that operate with respect to transactions, thereby acting as separate units within the volume in order to ensure that operations to one database within the volume do not affect operations of other databases or users of the volume, the series of computer programs"([Col. 3, lines 30-59, Col. 4-Col. 5, lines 1-46] wherein Bendert's teachings of shared file system request manager and a byte file system request manager which are independent from one another, and also have their separate file space (database)for storing and distinguish the different file system objects of the request managers) comprising:

"a logical volume of a file system that includes a plurality of resources among a distributed system, wherein one or more of the plurality of resources includes a resources manager, which is an object that participates in a transaction and provides a subsystem that implements a transaction-protected resources"([Col. 4, lines 63-Col. 5, lines 1-26]);

"and a plurality of resources managers maintained on file system volume, each resource manager independent from one another and having associated transactional metadata and a collection of associated files, wherein the transactional metadata is maintained based on a scope of control set for each of plurality of resource managers by defining a collection of files or resources based on one or more of directory hierarchy, a file extension, a file type, a timestamp, a file size, or a tag within the files for which the particular resources manager is responsible in order to allow various options offering different levels of performance, reliability, feature availability, and manageability on a per-resource basis rather than a per volume basis"([Col.4, lines 63-Col. 5, lines 1-46] Bendert's teachings of shared file system request manager and a byte file system request manager which are independent from one another and also includes file comprising metadata which also include file size or file type, also have their separate file space (database)for storing and distinguish the different file system objects of the request managers).

For claim 2, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Bendert teaches "wherein at least one resource manager

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comprises properties that differ from properties of another resource manager”([Col.4, lines 63-Col. 5, lines 23]wherein shared file system request manager and byte file system request manager corresponds to different file systems).

For claim 3, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Bendert teaches, “wherein at least one resource manager comprises transactional file system metadata that differ from transactional file system metadata of another resource manager” ([Col. 5,lines 1-25] wherein the shared file system request manager corresponds to the shared file system which stores files 70ab...n and 74ab...n in files space 80ab...n. which differs from the byte file system).

For claim 4, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Bendert teaches, “wherein one of the resource managers contains files associated with a first database, and wherein another of the resource managers contains files associated with a second database” ([Col. 5, lines 9-26] wherein the shared file system request manager has a file space 80ab...n and byte file system request manager has a file space 90ab...n).

For claim 5, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Bendert teaches “wherein the file system maintains a volume control data structure associated with a set containing at least one resource manager control data structure ”([Col. 6, lines 4-38, Col. 7, lines 1-11]).

For claim 6, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Bendert teaches "further comprising a mechanism in the file system for discovering a resource manager control data structure associated with a file data structure"([Col.6, lines 21-25, Col. 7, lines 14-17] wherein Bendert's teachings include an identifier and FCB associated with the WRB).

For claim 7, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Bendert teaches "wherein the file system maintains a first data structure having data identifying at least one resource manager control data structure" "([Col. 6, lines 4-38, Col. 7, lines 1-11] wherein a work request block is created using information from the file control block, due to request to open a file 70a.).

For claim 8, this claim is rejected on grounds corresponding to the argument give above for rejected claim 7 above. Bendert teaches " wherein each file in the collection includes a reference to data maintained in the first data structure to identify a resource manager control data structure for that file"(Col. 3, lines 12-26,Col. 4, lines 50-62, Col. 7, lines 15-29).

For claim 9, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Bendert teaches "an open file object on the volume, wherein

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the file system maintains a file control data structure corresponding to the open file object, the file control data structure including a reference to a resource manager control data structure that corresponds to a resource manager to which the file is associated" ([Col.6, lines 21-25, Col. 7, lines 14-17] wherein Bendert's teachings include an identifier and FCB associated with the WRB).

For claim 10, this claim is rejected on grounds corresponding to the argument give above for rejected claim 9 above. Bendert teaches "wherein the file control data structure includes data that indicates that the open file object comprises the resource manager" ([Col. 6, lines 4-38, Col. 7, lines 1-11])

For claim 11 this claim is rejected on grounds corresponding to the argument give above for rejected claim 9 above. Bendert teaches, "wherein the data is persisted in a record in a file system table, the record corresponding to the file" (Col. 6, lines 12-25).

For claim 12, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Bendert teaches "wherein the file system includes a set of functions for interfacing with the resource manager"([Col. 6, lines 10-13])

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For claim 13, this claim is rejected on grounds corresponding to the argument give above for rejected claim 12 above. Bendert teaches "wherein one function creates a new resource manager" (Col. 4, lines 9-14).

For claim 14, this claim is rejected on grounds corresponding to the argument give above for rejected claim 12 above. Bendert teaches "wherein one function starts a resource manager" ([Col. 5, lines 37-46, Col. 6, lines 10-13] wherein when a request arrives it will be sent to the request manager)

For claim 15, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Bendert teaches "wherein each resource manager corresponds to a directory hierarchy, and wherein the collection of associated files comprises files logically under that directory hierarchy"(Col. 5, lines 1-52).

For claim 16, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Bendert teaches "wherein associated transactional metadata includes a log file" (Col. 5, lines 1-4).

For claim 17, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Bendert teaches "receiving a request to open a file system object associated with a resource manager" (Col. 6, lines 11-17); "creating a file control block for the file system object" (Col. 6, lines 18-20); "determining whether the file

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control block references a resource manager control block and if not, discovering a resource manager control block corresponding to the file system object and associating the file control block with the discovered resource manager control block by storing a pointer in the file control block that identifies the discovered resource manager control block, the resource manager responsible for the file system object, or both" ([Col. 6, lines 4-38, Col. 7, lines 1-11] wherein a work request block is created using information from the file control block. wherein Bendert's teachings also includes an identifier(pointer)).

For claim 18, this claim is rejected on grounds corresponding to the argument give above for rejected claim 17 above. Bendert teaches "wherein discovering the resource manager control block includes creating a resource manager control block" ([Col. 6, lines 4-38, Col. 7, lines 1-11] creating WRB).

For claim 19, this claim is rejected on grounds corresponding to the argument give above for rejected claim 17 above. Bendert teaches "wherein associating the file control block with the discovered resource manager control block comprises writing a pointer into the file control block that points to the resource manager control block" ([Col.6, lines 21-25, Col. 7, lines 14-17] wherein Bendert's teachings include an identifier and FCB associated with the WRB).

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For claim 20, this claim is rejected on grounds corresponding to the argument give above for rejected claim 17 above. Bendert teaches "wherein discovering the resource manager control block includes determining whether the resource manager control block exists, and if not, creating the resource manager control block, and modifying the file control block to include an association with the resource manager control block" ([Col. 6, lines 4-38, Col. 7, lines 1-11] wherein a work request block is created using information from the file control block. wherein Bendert's teachings also includes an identifier (pointer)

For claim 21, this claim is rejected on grounds corresponding to the argument give above for rejected claim 17 above. Bendert teaches "wherein discovering the resource manager control block includes locating a file control block of a parent file that is associated with the resource manager control block"([Col. 6, lines 4-38, Col. 7, lines 1-11] wherein a work request block is created using information from the file control block, due to request to open a file 70a.).

For claim 22, this claim is rejected on grounds corresponding to the argument give above for rejected claim 17 above. Bendert teaches "wherein discovering the resource manager control block includes locating a reference to a table location containing resource manager control block data, and using the reference to obtain a pointer to the resource manager control block"([Col. 6, lines 4-38, Col. 7, lines 15-17, wherein update

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to data blocks is accomplished by finding the data blocks that were changed using the identifiers in the WRB]).

For claim 23, this claim is rejected on grounds corresponding to the argument give above for rejected claim 22 above. Bendert teaches "wherein locating the reference to the table location comprises reading a header of the file object"(Col. 6, lines 12-25).

For claim 24, this claim is rejected on grounds corresponding to the argument give above for rejected claim 22 above. Bendert teaches "further comprising maintaining a table including the table location in a volume control block" ([Col. 20-26]).

For claim 25, this claim is rejected on grounds corresponding to the argument give above for rejected claim 17 above. Bendert teaches "wherein each resource manager corresponds to a subdirectory in the file system, and wherein the file system object is logically associated with the subdirectory"(Col. 5, lines 1-52).

For claim 26, this claim is rejected on grounds corresponding to the argument give above for rejected claim 17 above. Bendert teaches "wherein at least one resource manager is associated with a database, and further comprising, performing a transaction that includes at least one operation by the database and at least one operation by the file system" ([Col. 5,lines 1-25] wherein the shared file system request manager

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corresponds to the shared file system which stores files 70ab...n and 74ab...n in files space(database) 80ab...n. which differs from the byte file system).

For claim 27, is rejected on grounds corresponding to the arguments given above for rejected claim 17 and is similarly rejected.

For claim 45, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Bendert teaches "based on the scope of control set for a selected resource manager, performing a function on one or more files or resources with respect to a selected resource manager, the resource managers being independent of one another such that the function is performed independently of any other resource manager" ([Col. 6, lines 4- 25, Col. 7, lines 32-38] wherein a function is performed on file 70a, a request to open the file within the shared file space 80a which corresponds to the shared file system request manager).

For claim 46, this claim is rejected on grounds corresponding to the argument give above for rejected claim 45 above. Bendert teaches "receiving a request to perform the function" ([Col. 6, lines 10-13]

For claim 47, this claim is rejected on grounds corresponding to the argument give above for rejected claim 46 above. Bendert teaches "wherein receiving the request comprises receiving an application programming interface call" ([Col. 7, lines 32-38] API).

For claim 48, this claim is rejected on grounds corresponding to the argument give above for rejected claim 45 above. Bendert teaches "wherein the function corresponds to a backup operation of at least some of the files of a resource manager" ([Col. 6, lines 45-50] wherein updated data blocks are written to the permanent storage).

For claim 49, this claim is rejected on grounds corresponding to the argument give above for rejected claim 45 above. Bendert teaches "wherein the function corresponds to a restore operation of at least some of the files of a resource manager" (Col. 6, lines 50-65

For claim 50, this claim is rejected on grounds corresponding to the argument give above for rejected claim 45 above. Bendert teaches "wherein the function corresponds to a roll forward to a point in time operation" (Col. 6, lines 40-44).

For claim 51, this claim is rejected on grounds corresponding to the argument give above for rejected claim 45 above. Bendert teaches "wherein the function corresponds to a crash recovery operation" (Col. 6, lines 40-44).

For claim 52, this claim is rejected on grounds corresponding to the argument give above for rejected claim 45 above. Bendert teaches "wherein the function corresponds to a redo phase of a recovery operation" (Col. 6, lines 50-62).

For claim 53, this claim is rejected on grounds corresponding to the argument give above for rejected claim 52 above. Bendert teaches "performing the function at least one other time" (Col.6, lines 50-62).

For claim 54, this claim is rejected on grounds corresponding to the argument give above for rejected claim 45 above. Bendert teaches "wherein the function corresponds to an undo phase of a recovery operation" (Col.6, lines 50-65).

For claim 55, is rejected on grounds corresponding to the arguments given above for rejected claim 45 and is similarly rejected.

Response to Argument

2. Applicant's arguments with respect to claims1-27 and 45-55 have been considered but are moot in view of the new ground(s) of rejection.

CONCLUSION

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLUBUSOLA ONI whose telephone number is 571-272-2738. The examiner can normally be reached on 10.00-6.30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIM VO can be reached on 571-272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KBP

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**KHANH B. PHAM
PRIMARY EXAMINER**